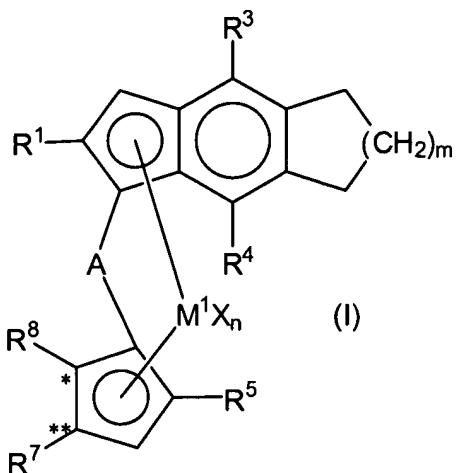


IN THE CLAIMS:

Please cancel claims 1-9 and 11. Please enter new claims 12-20 as shown in the following complete listing of claims:

Claims 1-11: (cancelled)

12. (new) An organometallic transition metal compound of the formula (I):



where

M^1 is an element of group 3, 4, 5 or 6 of the Periodic Table of the Elements or the lanthanides;

the radicals X are identical or different and are each an organic or inorganic radical, with two radicals X also being able to be joined to one another;

m is 1 or 2;

n is a natural number from 1 to 4;

R^1 is hydrogen or an organic radical having from 1 to 40 carbon atoms;

R^3 is a substituted or unsubstituted C₆-C₄₀ aryl radical;

R^4 is hydrogen, halogen or an organic radical having from 1 to 40 carbon atoms;

R^5 is an organic radical which has from 3 to 20 carbon atoms and is branched in the α position;

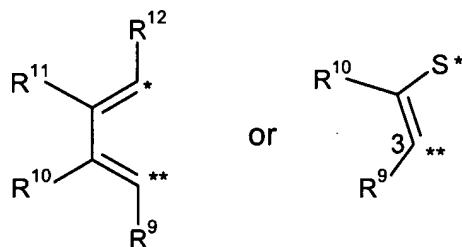
R^7 , R^8 are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms or R^7 and R^8 together with the atoms connecting them form a monocyclic or polycyclic, substituted or unsubstituted ring system which has from 1 to 40 carbon atoms and optionally contains heteroatoms selected from the group consisting of the elements Si, Ge, N, P, O, S, Se and Te; and

A is a bridge consisting of a divalent atom or a divalent group.

13. (new) The compound of claim **12** wherein R^1 and R^5 are different.

14. (new) The compound of claim **12** wherein M^1 is a Group 4 transition metal and $n=2$.

15. (new) The compound of claim **12** wherein R^7 , R^8 together form

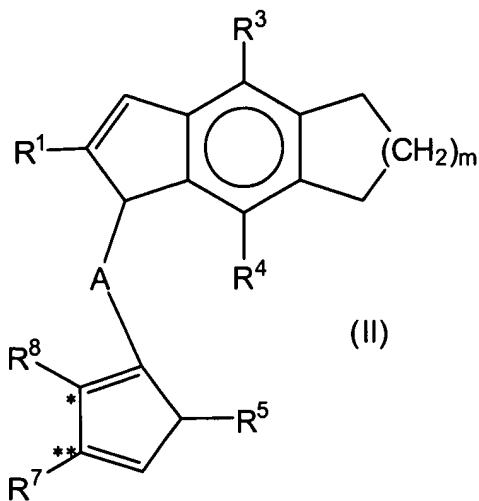


where

R^9 , R^{10} , R^{11} and R^{12} are identical or different and are each hydrogen, halogen or an organic radical having from 1 to 40 carbon atoms or two adjacent radicals R^9 , R^{10} and/or R^{11} together with the atoms connecting them form a monocyclic or polycyclic, substituted or unsubstituted ring system which has from 1 to 40 carbon atoms and optionally contains heteroatoms selected from the group consisting of the elements Si, Ge, N, P, O, S, Se and Te; and

A is a substituted silylene group or a substituted or unsubstituted ethylene group.

16. (new) A biscyclopentadienyl ligand system of the formula (II):



or its double bond isomers,

wherein

m is 1 or 2;

R¹ is hydrogen or an organic radical having from 1 to 40 carbon atoms;

R³ is a substituted or unsubstituted C₆-C₄₀ aryl radical;

R⁴ is hydrogen, halogen or an organic radical having from 1 to 40 carbon atoms;

R⁵ is an organic radical which has from 3 to 20 carbon atoms and is branched in the α position;

R⁷, R⁸ are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms or R⁷ and R⁸ together with the atoms connecting them form a monocyclic or polycyclic, substituted or unsubstituted ring system which has from 1 to 40 carbon atoms and optionally contains heteroatoms selected from the group consisting of the elements Si, Ge, N, P, O, S, Se and Te; and

A is a bridge consisting of a divalent atom or a divalent group.

17. (new) A catalyst system for the polymerization of olefins, which comprises:
 - (a) at least one organometallic transition metal compound of claim 12; and
 - (b) at least one cocatalyst which converts the at least one organometallic transition metal compound into a species which is polymerization-active toward at least one olefin.
18. (new) The catalyst system of claim 17 further comprising a support.
19. (new) A process which comprises polymerizing or copolymerizing at least one olefin in the presence of the catalyst system of claim 17.
20. (new) A process for preparing an organometallic transition metal compound, which comprises reacting the biscyclopentadienyl ligand system of claim 16 or a bisanion prepared therefrom with a transition metal compound.